

Appl. No. 10/798,814
Response dated: September 15, 2006
Reply to Office action of June 16, 2006

REMARKS

Claims 1-21 are pending in the present application. The Examiner has previously acknowledged Applicants' election of claims 9, 10, 12, 13 and 15, while claims 1-8, 11, 14 and 16-21 are withdrawn. Claims 9, 10, 12, 13 and 15 have been rejected. Claims 9 and 15 have been amended, leaving claims 9, 10, 12, 13 and 15 for consideration upon entry of the present response. No new matter was introduced by this amendment. Applicants respectfully request consideration and allowance of the claims.

Claim Rejections Under 35 U.S.C. § 103

Claims 9, 10, 12, 13 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,147,724 to Yoshii et al. (Yoshii) in view of United States Patent Publication No. 2002/0097353 to Lee further in view of U.S. Patent No. 5,815,224 to Hasegawa et al. (Hasegawa) for the reasons stated on pages 3-6 of the Office Action. Applicants respectfully traverse for at least the reason stated below.

The Examiner states that Yoshii discloses all of the elements of independent claims 9 and 15, except for (1) the particle interceptor being formed in a shape of a closed loop, which the Examiner states is disclosed in Figure 43 of Hasegawa; and (2) the second supporting frame portion fixing the liquid crystal display panel, which the Examiner states is disclosed in Figure 5 of Lee. The Examiner concludes that it would have been obvious to construct a liquid crystal display apparatus as taught by Yoshii wherein the particle interceptor is formed of a closed loop as in Hasegawa. The Examiner further concludes that it would have been obvious to construct a liquid crystal display apparatus as taught by Yoshii wherein the second supporting member frame portion of the liquid crystal display panel supporting member fixes the liquid crystal panel supporting member fixes the liquid crystal display panel as taught by Lee, since Lee teaches that by forming the second supporting member frame portion to fix in the liquid crystal display panel helps accommodating the LCD panel thus preventing the LCD panel from escaping (Paragraphs 0028 and 0048).

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In particular, the Examiner states, "Hasegawa et al. disclose in Figure 43 a particle interceptor (element GC) formed in a shape of a closed loop" on page 4, lines 12 to 13 of the Office Action. However, referring to following part A in Figure 43 of Hasegawa et al., it is respectfully submitted that Hasegawa et al. do not disclose a shape of a continuous, unbroken closed loop, as recited in amended independent claims 9 and 15. According to MPEP §§ 2125 and 2121.04, the picture must show all the claimed structural features and how they are put together. (*Jockmus v. Leviton*, 28 F.2d 812 (2d Cir. 1928)). Hasegawa et al. do not mention or disclose a shape of a continuous, unbroken closed loop in the specification and figures. Therefore, Hasegawa et al. do not teach the features of the present invention claimed in amended claims 9 and 15.

Accordingly, claims 9 and 15, including claims depending therefrom, i.e., claims 10, 12 and 13, define over Yoshii et al. in view of Lee and further in view of Hasegawa et al. for at least this reason.

Further, it is respectfully submitted that there is no motivation to modify the second supporting member frame portion (WSPC) of Yoshii as suggested by the Examiner. Further, Yoshii teaches away from modifying the second supporting member frame portion (WSPC) as recited in claims 9 and 15. Moreover, if the second supporting member frame portion (WSPC) was modified as suggested by the Examiner, it is respectfully submitted that the proposed modification or combination of the prior art (i.e., Lee) would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. See MPEP § 2143.01(VI).

In *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) the claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention required resiliency.

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The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.

As in In re Ratti, it is respectfully submitted that the suggested combination of Yoshii and Lee as suggested by the Examiner would require a substantial reconstruction and redesign of the elements shown in FIG. 4A relied upon by the Examiner of Yoshii, as well as to change the basic principle under which Yoshii was designed to operate.

More specifically, Yoshii discloses with respect to FIG. 4A that the glass substrate SUB1 extends beyond a peripheral edge of the frame spacer WSPC such that a lower surface of the glass substrate SUB1 is supported by a flat upper surface defining the frame spacer WSPC. A video signal line-side flexible printed circuit board FPC2 then extends to the external connection terminals of the glass substrate for electrical connection therewith. More specifically, symbol DSPC denotes a drain spacer installed between the shield case SHD and the glass substrate SUB1 to prevent the shield case SHD and the glass substrate SUB1 from butting against each other. The drain spacer DSPC covers the drain driver chip IC1 and has a notch NOT at a location corresponding to the drain driver chip IC1, so that the SHD and DSPC do not butt against the drain driver chip IC1, which is therefore protected against breakage. The drain spacer DSPC also holds the video signal line-side flexible printed circuit board FPC2 on the external connection terminals of the glass substrate SUB1 to prevent it from being separated from the glass substrate SUB1, thus ensuring reliable electrical connection between the SUB1 and the FPC2. (Col. 12, lines 51-64 and FIG. 4A.)

Therefore, Yoshii does not teach or suggest, and in fact teaches away from modifying WSPC to have first and second supporting member frame portions as in Lee, since this would require reducing a width of the glass substrate SUB1 and thus would position the external connection terminals thereof and the drain driver chip disposed thereon IC1 more inboard toward a center of SUB1 and thus would necessitate lengthening the video signal line-side flexible printed circuit board FCB2 for connection

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with the now inboard connection terminals on SUB1. Such a lengthening of signal lines would not be desired as is well known to those skilled in the pertinent art (e.g., increased resistance, more susceptible to noise, increased cost, etc.). Furthermore, such a modification would require strict tolerances with respect to thicknesses of both the frame spacer WSPC and glass substrate SUB1. If the thickness of the WSPC is thicker than a thickness of the glass substrate SUB1, the signal lines of FPC2 would be longer and be bent in a serpentine fashion in order to connect with connection terminals on the glass substrate SUB1. In addition, the interface between both upper surfaces of WSPC and SUB1 would preferably be flush to facilitate the frame spacer DSPC holding the signal line-side flexible printed circuit board FPC2 on the external connection terminals of the glass substrate SUB1. If, they are not flush with each other, the frame spacer may not be able to properly bias the DSPC against the connection terminals of the glass substrate SUB1 via the shield case SHD. In other words, the DSPC may be disposed at an angle when the WSPC and SUB1 are not flush with each other. However, there is no teaching of this concern, as there is no teaching or suggestion in either Yoshii or Lee to modify Yoshii by Lee. And in fact, Yoshii teaches away from modifying WSPC as in Lee to avoid having to unnecessarily lengthen the signal lines of the FPC2 by such a modification.

Further, Yoshii teaches that prevention of the liquid crystal display element PNL from projecting from the shield case SHD (i.e., retention of the LCD panel) is realized by the upper polarizing plate POL1 of plastic film being extended from the glass substrate SUB1 and held by the shield case SHD as shown in FIG. 4B. Yoshi also teaches that prevention of the liquid crystal display element PNL from projecting from the shield case SHD (i.e., retention of the LCD panel) can be realized by extending the viewing angle enlarging film VINC1 of plastic film from the glass substrate SUB1 and holding the extended VINC1 with the shield case SHD. (Col. 12, lines 31-44.) Thus, there is no teaching or suggestion that the frame spacer WSPC retains the LCD panel or that it can be modified for such function. If modified as suggested by the Examiner, the opening to

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the shield case SHD would have to be made smaller since SUB1 would be made smaller for retention by a stepped portion of WSPC.

It is respectfully submitted that the suggested combination of Yoshii and Lee as suggested by the Examiner would require a substantial reconstruction and redesign of the elements shown in FIG. 4A (i.e., SUB1, WSPC, IC1, DSPC and SHD) relied upon by the Examiner of Yoshii, as well as to change the basic principle under which Yoshii was designed to operate (e.g., sandwich SUB1 between SHD/DSPC/FPC2 and WSPC). Therefore, there is no teaching or suggestion to modify Yoshii with Lee as suggested by the Examiner.

Accordingly, it is respectfully requested that the rejection to claims 9, 10, 12, 13 and 15 under § 103 be withdrawn.

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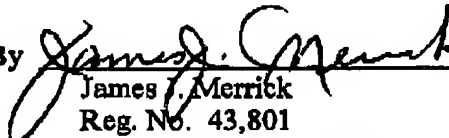
Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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